

**NOT FOR PUBLICATION**

UNITED STATES DISTRICT COURT  
DISTRICT OF NEW JERSEY

UNICOM MONITORING, LLC,	:	CIVIL ACTION NO. 06-1166 (MLC)
Plaintiff,	:	<b>MEMORANDUM OPINION</b>
v.	:	
CENCOM, INC., d/b/a AMERICAN	:	
DIGITAL MONITORING, DIGITAL	:	
DIVERTER.COM and	:	
SAVEONMYALARM.COM,	:	
Defendant.	:	
	:	

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**COOPER, District Judge**

Plaintiff, Unicorn Monitoring, LLC ("Unicom") commenced this action against defendant Cencom, Inc. ("Cencom") alleging Cencom infringed United States Patent No. 6,366,647 (the "'647 patent") held by Unicom. (Dkt. entry no. 1, Compl.) Cencom asserted affirmative defenses and counterclaims based on the alleged invalidity of the '647 patent. (Dkt. entry no. 4, Answer.)

Currently before the Court are a motion and cross motion for summary judgment pursuant to Federal Rule of Civil Procedure ("Rule") 56. (Dkt. entry no. 31, Cencom Mot. for Summ. J.; dkt. entry no. 33, Unicom Cr. Mot. for Summ. J.) In opposing Cencom's motion for summary judgment, Unicom seeks a judgment declaring that it has standing to sue for infringement of the '647 patent.

(Dkt. entry no. 41, Unicorn Opp'n to Cencom Mot. for Summ. J.)<sup>1</sup>

Cencom moves separately to preclude the testimony of Unicorn's expert, Michael Keating. (Dkt. entry no. 32, Mot. to Preclude.)

The Court held oral argument on the motions and cross motion on November 4, 2009, at which time the Court indicated that Unicorn has standing to enforce the '647 patent and that it would deny Cencom's motion to preclude Keating's testimony.<sup>2</sup> For the reasons stated herein and on the record, the Court will deny Cencom's motion to preclude Keating's testimony; deny Cencom's motion for summary judgment to the extent it challenges Unicorn's standing to enforce the '647 patent; and deny Cencom's motion for summary judgment as to its affirmative defenses and counterclaims that the '647 patent is invalid. The Court will grant Unicorn's cross motion to the extent it seeks a judgment declaring that it has standing to enforce the '647 patent; grant Unicorn's cross motion insofar as it asserts that Cencom infringes claim 1 of the

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<sup>1</sup> The Court treats this request for relief as part of Unicorn's cross motion for summary judgment.

<sup>2</sup> Cencom's motion to preclude Keating challenges Keating's credibility and the reliability of his methods. (Dkt. entry no. 32, Br. Supp. Mot. to Exclude Pl.'s Expert at 9-15.) At the summary judgment stage, a court may consider only the relevance of an expert report, not its credibility. See Howmedica Osteonics Corp. v. Zimmer, Inc., No. 05-897, 2008 WL 3871733, at \*6 (D.N.J. Aug. 19, 2008). Moreover, the Court indicated during the hearing on this motion that, in light of Keating's undisputed qualifications and the fact that the content of his reports fell within his area of expertise, Keating's testimony would satisfy Federal Rule of Evidence 702 and Daubert v. Merrell Dow Pharms., Inc., 509 U.S. 579, 597 (1993).

'647 patent; and deny Unicorn's motion for summary judgment insofar as it asserts that Cencom infringes claims 3 and 6 of the '647 patent.

#### **BACKGROUND**

Unicorn is the assignee of the '647 patent, issued to inventor Richard Webb on April 2, 2002. (Dkt. entry no. 33, Unicorn Stmt. of Facts, at ¶ 1; dkt. entry no. 33, Unicorn Br. Supp. Summ. J. at 1 & Ex. 3, Assignment, dated 4-27-99.) The invention claimed by the '647 patent is an "Alarm Report Call Rerouter," described as "[a] device for rerouting the report call of an alarm system to another telephone number through the interruption of the alarm system's out-dialing process." ('647 Patent, Abstract.) The invention allows subscribers to security monitoring services (e.g., intrusion or fire alarm systems) to choose or change their monitoring service provider without being limited to the telephone number programmed by the original vendor or installer of the alarm panel and without needing to reprogram the alarm panel itself. ('647 Patent, col. 1, 4-27.)

Cencom has been in the business of providing alarm monitoring systems and services since the mid-1990s. (Dkt. entry no. 31, Cencom Br. Supp. Summ. J. at 2.) In 2003 and 2004, Cencom began investigating ways to allow new Cencom customers with existing alarm panels to redirect the existing alarm panel's call to the Cencom central monitoring station without the need to

dispatch a technician to manually reprogram the alarm panel.

(Id. at 3-4.) Cencom worked with Sparr Electronics, based in India, to develop a plug-in device for this purpose called the DD2 Digital Diverter. (Id. at 3.) The DD2 Digital Diverter is modified to Cencom's specifications from an existing device manufactured by Sparr Electronics called the Line Powered Auto Dialer. (Id.) Cencom's modifications included re-labeling it as a Cencom DD2 Digital Diverter; disabling a component of the device called the OptoMOS relay in order to prevent seizure of all telephone lines by the auto dialer; and installation of a standard alarm panel system jack. (Id.) Cencom and Sparr Electronics reached an agreement for the production of the DD2 Digital Diverter in June 2004. (Unicom Br. Supp. Summ. J. at 3 & Ex. 4, Cats Dep. at 117:9-24.)

The '647 patent contains twelve claims, of which Unicom asserts claims 1, 3, and 6. Claim 1 is independent, while claims 3 and 6 rely upon claim 1.

Claims 1, 3, and 6 provide:

1. A device for connection between a telephone line and an existing alarm system to reroute an alarm system through the telephone line, from a preprogrammed central it [sic] monitoring station of the existing alarm system to a desired central monitoring station, said device comprising:

a detector for detecting activation of the existing alarm system through the telephone line, for generating an initiating signal;

a microprocessor responsive to the initiating signal for outputting a switch signal and a dial signal;

a switch responsive to the switch signal for reversibly isolating the existing alarm system from the telephone line; and

a dialer connected to the telephone line and responsive to said dial signal for dialing a telephone number of the desired central monitoring station on said telephone line, whereupon the switch reconnects the existing alarm system to the telephone line to implement rerouting of the alarm report from the existing alarm system.

. . .

3. The device of claim 1, wherein:

the detector being further adapted for detecting a voltage change across a telephone handset line connected to the existing alarm system and the presence of dialing activity of said existing alarm system on the telephone line; and

the switch being further adapted for momentarily returning the telephone to an on-hook condition to re-establish a dial tone prior to activation of the dialer.

. . .

6. The device of claim 1, wherein said dialer includes a dual-tone multiple frequency generator with input means connected to said microprocessor for receiving the dial signal from the microprocessor to implement dialing of the telephone number of the desired central monitoring station.

(`647 Patent, col. 5, line 15 - col. 6, line 5.)

The Court held a Markman hearing on January 6, 2009, to construct four terms found in the asserted claims of the '647 patent. See Markman v. Westview Instruments, Inc., 52 F.3d 967 (Fed. Cir. 1995), aff'd, 517 U.S. 370 (1996). (Dkt. entry no. 29, 1-6-09 Hr'g Tr.) At the Markman hearing, the Court made the following claim construction rulings:

Detector A component that can detect activation of the existing alarm system through the telephone line and generate an initiating signal.

Switch A device to connect and disconnect an electrical circuit.

Isolate To isolate the alarm panel from the telephone line through the function of a switch.

Dialer Circuitry that generates dialing signals to an alternative central monitoring station telephone number.

(Dkt. entry no. 28, 5-29-09 Order re: Markman Claim Construction and Mot. for Reconsideration; 1-6-09 Hr'g Tr. at 51:2-5; 58:18-20; 59:20-23.)

Unicom contends that the DD2 Digital Diverter infringes the '647 patent, either literally or under the doctrine of equivalents. Unicom also cross-moves for summary judgment in its favor as to Cencom's contentions that the '647 patent is invalid. Cencom moves for a finding of non-infringement, or in the alternative, a judgment declaring that the asserted claims of the '647 patent are invalid. The Court considers the issue of

infringement first, followed by the parties' arguments as to obviousness and anticipation.

#### **DISCUSSION**

Cencom argues that the DD2 Digital Diverter does not infringe claim 1 of the '647 patent because the DD2 Digital Diverter does not contain (1) a detector, because the DD2 Digital Diverter is unpowered until it receives a signal from the alarm panel, and lacks a component that detects the activation of the alarm system, (2) a switch, because the electrical circuit is never disconnected, or (3) a dialer, because the DD2 Digital Diverter lacks a switch for reconnecting the telephone line after the dialing function, as required by the "whereby" clause of the "dialer" element of claim 1. (Dkt. entry no. 31, Cencom Br. Supp. Summ. J. at 36-42.) In response, Unicom contends that Cencom's own expert, Dr. Souri, has admitted that the DD2 Digital Diverter contains each of the limitations found in claims 1, 3, and 6 as construed by the Court. (Unicom Br. Supp. Summ. J. at 1; Unicom Opp'n to Cencom Mot. for Summ. J. at 16-23.)

Because claim 1 is independent and claims 3 and 6 are dependent on claim 1, the attention of the parties and of the Court has been focused primarily upon claim 1.

## I. Applicable Legal Standards

### A. Summary Judgment Standard

The standard for a motion for summary judgment is well-settled and will be briefly summarized here. Rule 56(c) provides that summary judgment is proper if the pleadings, the discovery and disclosure materials, and any affidavits show that there is no genuine issue as to any material fact and that the movant is entitled to judgment as a matter of law. Fed.R.Civ.P. 56(c) (2). In making this determination, the Court must "view[] the record in the light most favorable to the non-moving party and draw[] all inferences in that party's favor." United States ex rel. Josenske v. Carlisle HMA, Inc., 554 F.3d 88, 94 (3d Cir. 2009) (citing Abramson v. William Patterson Coll., 260 F.3d 265, 276 (3d Cir. 2001)). If the Court determines, upon review of a motion and a cross-motion for summary judgment, that no genuine issue of material fact exists, "judgment may be entered in favor of the deserving party in light of the law and undisputed facts." City of Millville v. Rock, No. 07-1073, 2010 WL 199618, at \*5 (D.N.J. Jan. 12, 2010).

### B. Infringement Standard

An infringement inquiry is a two-step process. First, the Court must determine the scope and meaning of the patent claims as a matter of law. Markman, 52 F.3d at 979. Second, the allegedly infringing device is compared to each claim at issue to

determine if "all of the limitations of at least one claim are present, either literally or by a substantial equivalent, in the accused device." Teleflex, Inc. v. Ficosa N. Am. Corp., 299 F.3d 1313, 1323 (Fed. Cir. 2002); Laitram Corp. v. Rexnord, Inc., 939 F.2d 1533, 1535 (Fed. Cir. 1991) (noting that "the failure to meet a single limitation is sufficient to negate infringement of the claim"). A patentee has the burden of proving infringement by a preponderance of the evidence. Tech. Licensing Corp. v. Videotek, Inc., 545 F.3d 1316, 1327 (Fed. Cir. 2008).

Under the doctrine of equivalents, "a product or process that does not literally infringe upon the express terms of a patent claim may nonetheless be found to infringe if there is 'equivalence' between the elements of the accused product or process and the claimed elements of the patented invention."

Warner-Jenkinson Co. v. Hilton Davis Chem. Co., 520 U.S. 17, 21 (1997). "A finding of infringement under the doctrine of equivalents requires a showing that the difference between the claimed invention and the accused product or method was insubstantial or that the accused product or method performs the substantially same function in substantially the same way with substantially the same result as each claim limitation of the patented product or method." AquaTex Indus., Inc. v. Techniche Solutions, 479 F.3d 1320, 1326 (Fed. Cir. 2007).

**C. Legal Standards Governing Patent Validity**

A patent is presumed to be valid, and each of its claims are presumed valid independent of the validity of other claims. 35 U.S.C. § 282. A party asserting the invalidity of a patent or one or more of its claims must establish such invalidity by clear and convincing evidence. Bausch & Lomb, Inc. v. Barnes-Hind/Hydrocurve, Inc., 796 F.2d 443, 446 (Fed. Cir. 1986). Cencom contends that the asserted claims of the '647 patent are invalid on the grounds of obviousness under 35 U.S.C. § 103 and anticipation under 35 U.S.C. § 102.

**1. Anticipation**

35 U.S.C. § 102 states that a claimed invention is invalid for anticipation where, inter alia,

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for patent, or

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of the application for patent in the United States . . .

35 U.S.C. § 102(a)-(b).

"Although anticipation under 35 U.S.C. § 102 is a question of fact, it may be decided on summary judgment if the record reveals no genuine dispute of material fact." Golden Bridge Tech., Inc. v. Nokia, Inc., 527 F.3d 1318, 1321 (Fed. Cir. 2008).

The test for anticipation is the same two-step process used in

determining infringement: a court must, first, construct the claims, and second, compare the patented invention to the prior art. See Int'l Seaway Trading Corp. v. Walgreens Corp., 589 F.3d 1233, 1239 (Fed. Cir. 2009); Bristol-Myers Squibb Co. v. Ben Venue Labs., Inc., 246 F.3d 1368, 1378 (Fed. Cir. 2001) ("[T]hat which would literally infringe if later anticipates if earlier.").

## **2. Obviousness**

A patent is invalid for obviousness "if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time to a person having ordinary skill in the art to which said subject matter pertains." 35 U.S.C. § 103(a). Obviousness is a question of law, based on the following underlying factual inquiries: "(1) the scope and content of the prior art, (2) the differences between the prior art and the claims at issue, (3) the level of ordinary skill in the pertinent art, and (4) secondary considerations of nonobviousness."

Perfect Web Techs., Inc. v. InfoUSA, Inc., 587 F.3d 1324, 1327 (Fed. Cir. 2009) (citing KSR Int'l Co. v. Teleflex, Inc., 550 U.S. 398, 406 (2007)). "Where . . . the content of the prior art, the scope of the patent claim, and the level of ordinary skill in the art are not in material dispute, and the obviousness

of the claim is apparent in light of these factors, summary judgment is appropriate." KSR Int'l Co., 550 U.S. at 427.

## **II. Comparison of the DD2 Digital Diverter to the '647 Patent**

### **A. Claim 1**

Claim 1 of the '647 patent describes "[a] device for connection between a telephone line and an existing alarm system to reroute an alarm report through the telephone line, from a preprogrammed central [IT] monitoring station of the existing alarm system to a desired central monitoring station." ('647 Patent, col. 5, lines 16-20; Unicom Br. Supp. Summ. J., Ex. A, Claim Chart.) Unicom contends that the DD2 Digital Diverter is intended to serve the same purpose: "The DD2 is meant to be installed between telephone lines and an existing alarm system to reroute an alarm call from a preprogrammed monitoring station to a desired central monitoring station." (Unicom Br. Supp. Summ. J. at 5; Claim Chart at 1.) The Court thus considers whether the DD2 Digital Diverter contains each of the limitations stated in claim 1.

#### **1. Detector**

The Court construed the term "detector" as "a component that can detect activation of the existing alarm system through the telephone line and generate an initiating signal." Cencom argues that the DD2 Digital Converter does not literally infringe the '647 patent because it lacks a "component that can detect

activation of the existing alarm system" and asserts that "[i]t is undisputed that the DD2 is dead, un-powered and doing nothing until it receives power through the telephone line." (Cencom Br. Supp. Summ. J. at 37.)

Cencom's expert, Dr. Souri, asserts that whereas the '647 patent requires detection of the alarm signal via galvanic isolation of the telephone handset and dialing activity of the alarm dialer, the DD2 Digital Diverter has no "detector" because it does not detect activity of the telephone handset, and only listens to the dialing activity of the alarm system. (Cencom Br. Supp. Summ. J., Ex. L, Souri Report at 13.) Cencom attempts to distinguish the DD2 Digital Diverter from the '647 patent because the latter, in a preferred embodiment, calls for a device that is continuously powered, and requires a detector to recognize alarm system activity to begin generating an initiating signal.

(Cencom Br. Supp. Summ. J. at 37; '647 Patent at col. 3, lines 29-60, col. 5, lines 21-23.) Dr. Souri further explained at his deposition that the DD2 Digital Diverter operates differently than the invention claimed in the '647 patent because in the DD2 Digital Diverter,

when the alarm is on hook there is no power coming in . . . and so the DD2 is simply not powered up and nothing is operating. There's no flow of current, essentially. Once the alarm panel goes off hook, then that causes or results in continuity of the loop to loop between the central office and the alarm panel and you have a voltage which has developed which is

basically the battery voltage from the teleco side that drives a loop current through the tip and ring. This voltage develops across the capacitor C1, and that voltage is then used to power up the DD2. So the DD2 powers up when the alarm panel goes off hook.

(Cencom Br. Supp. Summ. J., Ex. E, Souri Dep. at 46:14-47:4, 56:12-57:8.) Thus, whereas the '647 patent requires that a "detector . . . generate an initiating signal," Cencom contends that in the DD2 Digital Diverter, it is the telephone line (the activity of which activates the device) that generates the initiating signal, "not a component of the DD2." (Cencom Br. Supp. Summ. J. at 38.) Although the DD2 Digital Diverter contains a dual-tone multi-frequency ("DTMF") decoder or chip (identified in the record here as "U3 Chip") that listens for one valid DTMF tone, and could be considered a detector, Cencom contends that the U3 Chip does not send any initiating signal to any other part of the device; rather, the presence of power causes the DD2 Digital Diverter to perform its call rerouting function, while the U3 Chip merely signals the microcontroller component, designated as U1 in the reverse schematic of the DD2 Digital Diverter ("U1 Microcontroller"), that a DTMF tone has been registered. (Id.)<sup>3</sup>

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<sup>3</sup> The Court notes that the '647 patent apparently calls for a DTMF encoder to be the "dialer," whereas the DD2 Digital Diverter has a DTMF decoder chip. In the DD2 Digital Diverter the U3 Chip does not do any dialing; rather, the U1 Microcontroller generates the DTMF tones. (See Souri Dep. at 53:23-55:4; Cencom Br. Supp. Summ. J., Ex. C, Keating Dep. 145:15-146:5.)

Unicom responds that the U3 Chip does generate an initiating signal by activating the U1 Microcontroller, which in turn signals the Q1 transistor to interrupt the loop current "to basically simulate an on-hook condition" of the telephone line, in order to prevent the alarm panel from dialing out its phone number. (Unicom Br. Supp. Summ. J. at 6.) In support of its contention that the U3 Chip is a "detector" that generates initiating signals, Unicom points to the deposition testimony of Cencom's expert, Dr. Souri:

- Q. . . . When you were doing your testing [of the DD2 Digital Diverter], did you do a test where you would have taken, I guess it's a phone set instead of a panel, took it off hook and then there would be power coming in to the DD2 and but then didn't dial any numbers?
- A. Yes.
- Q. Did you do that test?
- A. Yes.
- Q. What happened?
- A. Nothing.
- Q. The DD2 just sat there?
- A. Yes.
- Q. And if you hung it up, it would just power down?
- A. Correct.
- Q. And the DD2 would only do something if you dialed a number on your phone set?
- A. The DD2 would do something if it's - yes, if it's listening in and interprets a DTMF tone, then something would happen.

(Souri Dep. at 58:6-59:1; see also Unicom Br. Supp. Summ. J. at 6.)

The Court finds that, pursuant to its construction of the term, the U3 Chip in the DD2 Digital Diverter is a "component" of

the device that performs both required functions of detecting activation of the existing alarm system through the telephone line (by recognizing the DTMF tone of the alarm panel), and generating an initiating signal (by instructing the U1 Microcontroller to reduce the loop current so that the alarm panel call registers as a hang-up on the telephone line, freeing up the line for the U1 Microcontroller to modulate the voltage across resistors to generate DTMF tones representing the telephone number programmed into the EEPROM chip designated as U4 ("U4 EEPROM Chip")). (See Unicom Br. Supp. Summ. J., Exs. 5-7.)<sup>4</sup> Cencom's protestations that the U3 Chip "does not send an initiating signal" are belied by the testimony of its expert, Dr. Souri, who testified that his experiments on the DD2 Digital Diverter showed that the device would not perform its intended function of rerouting a call if no DTMF tones were detected; powering up alone would not achieve this objective. (Souri Dep. at 58:6-59:1.)

Because Cencom's own expert concluded that the DD2 Digital Diverter would not work as intended without the U3 Chip first detecting a DTMF tone, Cencom's conclusory assertion that "in the

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<sup>4</sup> The U4 EEPROM Chip is "the memory chip where the alternative number is preprogrammed and stored." (Souri Dep. at 51:9-12; see also Unicom Br. Supp. Summ. J., Ex. 8, Keating Report at 4 (identifying the EEPROM chip in the DD2 Digital Diverter as a model 24C04).) EEPROM stands for "electrically erasable programmable read only memory." See, e.g., SanDisk Corp. v. Memorex Prods., Inc., 415 F.3d 1278, 1280 n.1 (Fed. Cir. 2005).

DD2, the U3 component that listens for a DTMF tone does not send an initiating signal. Rather, upon receiving the power, the DD2 begins to perform those functions related to alarm signal redirecting," lacks support in the record. (Cencom Br. Supp. Summ. J. at 38.) That an embodiment of the '647 patent calls for a continuously powered device, while the DD2 Digital Diverter remains in standby mode until it powers on when the alarm panel dials out, does not preclude the Court's finding that the DD2 Digital Diverter contains the "detector" limitation of claim 1.<sup>5</sup>

## **2. Microprocessor**

Claim 1 requires that the device contain a "microprocessor responsive to the initiating signal for outputting a switch signal and a dial signal." ('647 Patent, col. 5, lines 24-25.) The parties do not dispute that the DD2 Digital Diverter contains a microprocessor, the U1 Microcontroller,<sup>6</sup> that is responsive to

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<sup>5</sup> The Court declines to read continuous power as a limitation of claim 1, as evidenced by dependent claim 4, claiming "the device of claim 1, further including . . . power supply means for providing electrical power to said device, said power supply means including a rechargeable battery recharged by power from said telephone line during a standby mode of operation." ('647 Patent at col. 5, lines 56-60.)

<sup>6</sup> Both parties' experts used the terms microprocessor and microcontroller interchangeably. The Court's brief inquiry into the difference between the two revealed that a microcontroller typically contains a microprocessor, in addition to other components such as memory, input/output, and timers or clocks, on an integrated circuit. Cf. Nat'l Controls Corp. v. Nat'l Semiconductor Corp., 833 F.2d 491, 494 n.2 (3d Cir. 1987) ("Microprocessor units are interchangeably referred to by the parties and in this opinion as microcontroller units, microchips, 'chips,' and teleset chips.").

the signal of the U3 Chip. (Cencom Br. Supp. Summ. J. at 38; Unicom Br. Supp. Summ. J. at 6-7; dkt. entry no. 39, Revised Reverse Engineering Schematic; Souris Dep. at 48:4-11, 52:3-11.) The U1 Microcontroller is responsible for causing the Q1 transistor (the switch) to interrupt the loop current in order to simulate an on-hook condition, terminating the alarm panel's call and reestablishing a dial tone. (Souri Dep. at 49:6-50:12.)

Cencom's expert's conclusory statement that "[s]ince [the] DD2 device does not contain the dialer chip that receives a digital signal as specified in the 647 patent, and it is the microprocessor that directly sends out the analog DTMF signal into the phone line, the microprocessor in the DD2 device does not send out a dial signal as specified in the 647 patent," is immaterial. (Souri Report at 14.) See Telemac Cellular Corp. v. Topp Telecom, Inc., 247 F.3d 1316, 1329 (Fed. Cir. 2001) ("Broad conclusory statements offered by . . . experts are not evidence and are not sufficient to establish a genuine issue of material fact."). The U3 Chip's initiating signal to the U1 Microcontroller instructs the microprocessor to cut the current loop in order to "clear[] the line of the previously dialed digits" and allow the microprocessor to modulate voltage through the device, generating DTMF tones corresponding to the new number programmed in the U4 EEPROM Chip. (Unicom Br. Supp. Summ. J., Ex. 5, DD2 Flow Chart; Souris Dep. at 46:4-11, 50:5-51:12, 63:15-

64:3, 64:20-65:4.) The U1 Microcontroller's function causes the original alarm panel phone call to disconnect and clears the line, getting a new off-hook dial tone, so the DD2 Digital Diverter can dial out the new number. The Court therefore finds that the DD2 Digital Diverter contains the "microprocessor" limitation of claim 1, in the form of the U1 Microcontroller, specifically, a Microchip brand PIC16F628 microcontroller.

(Keating Report at 4; Revised Reverse Engineering Schematic.)

### **3. Switch**

The '647 patent describes a device comprising "a switch responsive to the switch signal for reversibly isolating the existing alarm system from the telephone line." ('647 Patent, col. 5, lines 26-28.) The Court construed "switch" to mean "a device to connect and disconnect an electrical circuit."

Cencom maintains that the DD2 Digital Diverter does not contain a switch. (Cencom Br. Supp. Summ. J. at 39.) Specifically, Cencom represents that while a transistor in the DD2 Digital Diverter "acts as a regulator for the amount of current that is allowed to flow through the internal DD2 circuit," in order to reduce the amount of loop current sufficiently that the central telephone office would understand a hang-up by the alarm panel dialer, the electrical circuit is never completely disconnected in the DD2 Digital Diverter during the call rerouting process. (Id. at 40.) Cencom avers that the

'647 patent requires a total disconnection of the alarm panel from the telephone line, by means of a mechanical switch that reversibly isolates the existing alarm system in order that the new number may be dialed out. (*Id.* at 41.)

Unicom, on the other hand, contends that the DD2 Digital Diverter does utilize a switch that meets the limitation described in claim 1. Unicom explains its view of how the DD2 Digital Diverter works as follows, referring heavily to Cencom's expert's deposition testimony: "After the DD2 detects valid DTMF tones, the DD2 interrupts the loop current to basically simulate an on-hook condition" to prevent the alarm panel from dialing out its preprogrammed number. (Unicom Br. Supp. Summ. J. at 6; see also Souris Dep. at 49:6-12.) This interruption is accomplished when the U1 Microcontroller sends a switch signal to the Q1 transistor to interrupt the current. (Unicom Br. Supp. Summ. J. at 6; Souris Dep. at 49:12-14.) Once the Q1 transistor interrupts the loop current, the central monitoring office interprets the loss of current as a hang-up or going on-hook. (Souris Dep. at 49:16-17.) Unicom contends that transistors that perform such a function were well-known in the art as "switches" when the '647 patent was filed. (Unicom Br. Supp. Summ. J. at 6.)

Because the Court construed "switch" to mean "a device to connect and disconnect an electrical circuit," the DD2 Digital Diverter, which the parties agree does not actually disconnect

the electrical circuit in its operation, does not literally infringe the "switch" limitation of claim 1. However, based on the testimony of Cencom's expert regarding the purpose and function of the Q1 transistor in the DD2 Digital Diverter, the Court finds that the DD2 Digital Diverter infringes that limitation under the doctrine of equivalents. The Q1 transistor in the DD2 Digital Diverter performs substantially the same function as the "switch" limitation in the '647 patent, in that it responds to a signal (here, from the U1 Microcontroller) and causes the central monitoring station of the alarm panel preprogrammed number to interpret a "hang-up" or recognize an "on-hook" position. Whether the electrical circuit is broken, or the voltage of the current merely reduced, the result is the same: the alarm panel's attempt to call is disconnected, so that the dialer may use the line to call the new number programmed into the call rerouting device.

#### **4. Dialer**

Claim 1 of the '647 patent requires that the device claimed include a "dialer connected to the telephone line and responsive to said dial signal for dialing a telephone number of the desired central monitoring station on said telephone line, whereupon the switch reconnects the existing alarm system to the telephone line to implement rerouting of the alarm report from the existing alarm system." ('647 Patent, col. 5, lines 30-36 (emphasis

added).) The Court construed "dialer" to mean "circuitry that generates dialing signals to an alternative central monitoring station number."

While not contesting that the DD2 Digital Diverter contains "circuitry that generates dialing signals," as the term "dialer" was construed by the Court, Cencom contends that the "dialer" limitation of claim 1 necessarily means the invention claimed in the '647 patent "uses two switches to disconnect the alarm panel from the telephone line to clear the line of the initial call to the original monitoring station. The device then uses two switches to redirect the alarm signal to a new monitoring station." (Cencom Br. Supp. Summ. J. at 41 (emphasis added).) According to Cencom, in order for the invention claimed in the '647 patent to perform its intended function, it must first connect to the telephone line so it can dial out, then re-connect the previously disconnected alarm panel signal, so the alarm signal can go to the central monitoring station. (Id.) Cencom asserts that the DD2 Digital Diverter does not perform the second switching function described in the last clause because the circuit is never completely disconnected; instead, "a short period of time" after the telephone company interprets the loss in voltage as a hang-up by the alarm panel, a transistor in the device increases the current so that the device can dial out using its DTMF capabilities. (Id. at 42.) Thus, Cencom

concludes, "the DD2 does not contain a switch or second switch that reconnects the existing alarm system to the telephone line to implement the re-routing of the alarm report from the existing alarm system." (Id.)

Nothing in the Court's construction of "dialer" suggests that claim 1 contains a limitation that the dialer use two separate switches in isolating the signal from the alarm panel and dialing out the new number through the call rerouter device. Such an interpretation would render superfluous claim 5 of the '647 patent, which is dependent on claims 1 and 4:

4. The device of claim 1, further including: power supply means for providing electrical power to said device, said power supply means including a rechargeable battery recharged by power from said telephone line during a standby mode of operation;

5. The device of claim 4, wherein said switch includes:  
a first relay operable for hanging up said telephone line, and  
a second relay operable for isolating the existing alarm system from said telephone line.

('647 Patent at col. 5, lines 56-65.) See, e.g., Blackboard, Inc. v. Desire2Learn, Inc., 574 F.3d 1371, 1376 (Fed. Cir. 2009); Phillips v. AWH Corp., 415 F.3d 1303, 1315 (Fed. Cir. 2005) ("[T]he presence of a dependent claim that adds a particular limitation gives rise to a presumption that the limitation in question is not present in the independent claim.").

Unicom's expert theorized that, in the DD2 Digital Diverter, after the U1 Microcontroller causes the Q1 transistor to reduce the current to register the alarm panel call signal as a hang-up, the device begins to draw power once more and re-establishes a dial tone. (Keating Report at 6.) The U1 Microcontroller then generates a DTMF string using data from the U4 EEPROM Chip throughout the dialing sequence, at which point the alarm panel connects to the central monitoring station. (Id.) Cencom's expert agrees that once the current is reduced and the central monitoring station recognizes a hang-up of the alarm panel, after a specified time, the device begins to draw power again in a way that the current modulates the resistance of the Q1 transistor "in a manner such that the current now that is flowing through Q1 is actually the . . . electrical current representation of the DTMF tones" programmed into the U4 EEPROM Chip, causing a connection with the central monitoring office. (Souri Dep. 50:22-55:4, 63:16-65:4.)

Even accepting Cencom's contention that the DD2 Digital Diverter lacks the digital DTMF encoder dialing chip of the '647 device, we find that the DD2 Digital Diverter's "network of passive components . . . such as resistors and capacitors and conductors," which allow transmission of a voltage representation of DTMF tones through the loop current, constitutes "circuitry that generates dialing signals to an alternative central

monitoring station number." (Souri Dep. at 52:23-53:22; see also Keating Dep. at 154:6-15.) It is further undisputed that the process wherein the DD2 Digital Diverter reengages the current causes the reestablishment of the connection of the alarm panel through the DTMF tones representing the number, programmed into the U4 EEPROM Chip, associated with the new central monitoring station. The Court thus finds that no genuine issue of material fact exists as to whether the DD2 Digital Diverter contains the "dialer" limitation found in claim 1.

**B. Claim 3**

Cencom, perhaps resting on its non-infringement arguments as to claim 1, on which claim 3 is dependent, does not address whether the DD2 Digital Diverter does or does not infringe claim 3. Unicorn contends that the DD2 Digital Diverter infringes claim 3 because it "utilizes the voltage change (due to the flow of loop current) across a telephone handset line connected to the existing alarm system and the presence of dialing activity." (Unicom Br. Supp. Summ. J. at 9 & Ex. 1.)

The Court having already established in its comparison of the DD2 Digital Diverter and the '647 patent's "detector" limitation of claim 1 that the DD2 Digital Diverter's detector is the U3 Chip, and the Court also having noted that the U3 Chip detects DTMF tones from the alarm panel, while the U1 Microcontroller is responsible for causing a change in voltage,

which is then detected by the Q1 transistor, we cannot now find that the U3 Chip is "adapted for detecting a voltage change across a telephone handset line." We therefore conclude the DD2 Digital Diverter does not infringe claim 3 of the '647 patent.

**C. Claim 6**

Unicom contends, with little elaboration, that the DD2 Digital Diverter includes a DTMF generator and thus infringes claim 6. (Unicom Br. Supp. Summ. J. at 10 & Claim Chart.) However, as the Court has already noted, the DD2 Digital Diverter lacks a DTMF encoder or generator. In the DD2 Digital Diverter, generation of the DTMF signals is achieved through circuitry that modulates the loop current into voltage representations of DTMF tones, rather than the DTMF dialing chip of the '647 patent. (See supra n.3.) Additionally, while claim 6 specifies that the dialer must have input means connected to the microprocessor for receiving the dial signal to implement dialing of the desired number, in the DD2 Digital Diverter, the U1 Microcontroller itself controls the dialing process, drawing from the data stored in the separate U4 EEPROM chip for the desired number. The Court therefore finds that the DD2 Digital Diverter does not infringe claim 6 of the '647 patent.

**III. Anticipation**

Cencom contends that claims 1 and 6 of the '647 patent are invalid as anticipated. (Cencom Br. Supp. Summ. J. at 23.) A

patent claim is invalid as anticipated if the accused infringer can show by clear and convincing evidence that "each and every limitation of a claim is found, expressly or inherently, in a single prior art reference." Planet Bingo, LLC v. GameTech Int'l, Inc., 472 F.3d 1338, 1346 (Fed. Cir. 2006); see also Mentor H/S, Inc. v. Med. Device Alliance, Inc., 244 F.3d 1365, 1375 (Fed. Cir. 2001).

In support of its anticipation argument, Cencom points to the Mitel Smart-1 device as anticipating every limitation of claim 1 of the '647 patent. (Cencom Br. Supp. Summ. J. at 24.) Cencom points to a decision of the United States Court of Appeals for the Tenth Circuit to establish that the Mitel Smart-1 device became available for sale in 1985. Mitel, Inc. v. Iqtel, Inc., 124 F.3d 1366, 1368 (10th Cir. 1997) (affirming denial of Mitel's motion for a preliminary injunction against alleged infringer of copyrighted material). (Cencom Br. Supp. Summ. J. at 9 & Ex. N.) "[T]he decision of another court or agency . . . [may be] a proper subject of judicial notice." Opoka v. Immigration & Naturalization Serv., 94 F.3d 392, 394-95 (7th Cir. 1996). The Tenth Circuit identified the Mitel Smart-1 device as a "call controller," or "a piece of computer hardware that enhances the utility of a telephone system by automating the selection of a particular long distance carrier and activating optional features such as speed dialing." Mitel, Inc., 124 F.3d at 1368. Beyond

the fact that the Mitel Smart-1 call controller device became available in the 1980s, the Tenth Circuit opinion offers little guidance for this patent infringement case because that case involved alleged copyright infringement, not patent infringement. See id. at 1368, 1376 (concluding that Mitel failed to demonstrate that its instruction set of command codes, used to activate and manipulate the features of the device, was amenable to copyright protection).

In further support of its claim that the Mitel Smart-1 anticipates the '647 patent, Cencom points to an Installation and Programming Guide for the Smart-1 bearing a copyright date of 2000. (Cencom Br. Supp. Summ. J., Ex. M ("Programming Guide").) Because the '647 patent application was filed on May 3, 1999, the Programming Guide is not prior art for purposes of 35 U.S.C. § 102(a)-(b) and cannot serve as the basis for invalidity of the '647 patent. Cencom's argument that because the Tenth Circuit's decision in Mitel, Inc. pertained to an earlier version of the Programming Guide, it has established that programming instructions for the Mitel Smart-1 device were available prior to the '647 patent application, is similarly unavailing. (Cencom Br. Supp. Summ. J. at 9.) Cencom has not proffered an authenticated earlier Programming Guide, and its expert testified that he had not seen any earlier instructions in his literature search. (Souri Dep. at 80:10-81:11.)

Cencom's final basis for invoking invalidity of the '647 patent is the testimony and report of its expert, Dr. Souri, who claims to have acquired in 2007 a refurbished Mitel Smart-1 device originally manufactured in 1990. (Cencom Br. Supp. Summ. J. at 9; see also Souri Report at 5-6.) Dr. Souri asserts that the refurbished Mitel Smart-1 device he tested contains all of the elements of claim 1 of the '647 patent: a detector for detecting dialing activity of the existing alarm system through the telephone line and generating an initiating signal, a microprocessor responsive to the initiating signal, a switch for isolating the existing alarm system from the telephone line, and a dialer for dialing the new telephone number whereupon a switch reconnects the alarm system to the telephone line. (Souri Report at 7.)

The Court finds that a genuine issue of material fact exists with respect to whether the Mitel Smart-1 device constitutes prior art, and therefore declines to reach the question of whether that device meets all of the elements of claim 1. Although Cencom submitted what appears to be a photograph of the Mitel Smart-1 device tested by Dr. Souri bearing a sticker stating its date of manufacture as July 23, 1990, that date is only visible because a newer sticker had been peeled back from the device with the following words visible: "Warranty Destroyed." (Cencom Br. Supp. Summ. J., Ex. P, Photographs.)

Dr. Souris does not offer any details of his purchase of the refurbished device that could support an inference that the "refurbished" device was the same in 2007 as it existed in the marketplace prior to May 3, 1999. (Souri Dep. at 76:8-78:18.) Dr. Souris testified that he did not corroborate the authenticity of the Mitel Smart-1 device with anyone, including Mitel. (Souri Dep. at 78:19-79:3.) Thus, Cencom has not put forth undisputed evidence that any claims of the '647 patent were anticipated by prior art, and a finding of summary judgment in its favor on its anticipation defense is unwarranted. The evidence on the record, however, raises a triable issue of fact, and Unicom's cross motion for summary judgment in its favor on Cencom's anticipation defense will also be denied.

#### **IV. Obviousness**

Cencom asserts that claim 1 of the '647 patent is invalid as obvious over the Mitel Smart-1 device, in light of United States Patent 3,327,060 (the "'060 patent"). (Cencom Br. Supp. Summ. J. at 28.) The '060 patent, filed on August 26, 1963 and issued on June 20, 1967, discloses an "Alarm System Using Telephone Exchange and Automatic Dialer for Transmission of Tone Frequencies." (Id., Ex. O, '060 Patent.) Cencom contends that, based on its view that the Mitel Smart-1 device contains all of the elements of claim 1 of the '647 patent, the combination of the Mitel Smart-1 call controller device with the sending of

alarm signals through telephone wires as disclosed in the '060 patent "performs the same function as the claimed invention" and thus would have been obvious to one of skill in the art at the time the invention was made. (*Id.* at 30-33.)

The Court has declined to grant Cencom summary judgment on its anticipation defense for failure to establish that the Mitel Smart-1 anticipated claim 1 of the '647 patent. For the same reason, Cencom's obviousness defense fails at this stage, and the Court will deny the motion and cross motion for summary judgment insofar as they concern obviousness.

### CONCLUSION

The Court, for the aforementioned reasons, concludes that the DD2 Digital Diverter infringes on claim 1 of the '647 patent and does not infringe on claims 3 or 6 of the '647 patent. The Court will therefore grant Unicom's cross motion for summary judgment insofar as it asserts infringement of claim 1 and deny Unicom's cross motion for summary judgment insofar as it asserts infringement of claims 3 and 6. The Court will deny Cencom's motion for summary judgment as to non-infringement. The Court will deny the motion and cross motion for summary judgment as to Cencom's invalidity defenses of anticipation and obviousness. The Court will deny Cencom's motion to preclude the testimony of Unicom's expert, Michael Keating. The Court will grant Unicom's cross motion for summary judgment insofar as it seeks a judgment declaring that it has standing to enforce the '647 patent.

The Court will issue an appropriate order and judgment.

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s/ Mary L. Cooper  
**MARY L. COOPER**  
United States District Judge

Dated: March 12, 2010